

Appl. No. 09 / 287,478

Amdt. Dated: Dec. 16, 2004

Amendment E

Reply to Office action of July 12, 2004, mailed July 15

"U.S. Provisional Patent Application 60 / 080,905"

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A server simulation method, for use with at least one Client communicating with at least one Server over a Network by means of a Stateless Communications Protocol, network of computers comprising at least one Client, said at least one Client including memory means containing instructions for a Browser, and at least one Server communicatively coupleable to said at least one Client, said at least one Server including memory means containing instructions for implementing a simulation method, said simulation method comprising the steps of:
- a) Creating creating and transmitting a Unique Identifier to said at least one Client, said Unique Identifier to be used by at least one Server for at least one of the purposes of a) maintaining server state including, but not limited to, separation and management of User data, b) limiting access to or limiting use of server resources, c) tracking server usage or d) server security;
  - b) Transmitting transmitting Form Structure Creation Data to said at least one Client; said Form Structure Data comprising at least one of i) a display list of User Interface (UI) elements such as an HTML/XML <FORM> or ii) software instructions for creating a similar client UI, such as JavaScript, Java, ActiveX, etc.
  - c) Accepting accepting User Form Data and said Unique Identifier from said at least one Client;
  - d) Merging merging said User Form Data from said at least one Client with other data, including simulation template data;

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- e) ~~Processing~~ processing said merged data to produce output data, wherein said output data are functions of a simulation and in a format compatible with said at least one Client ~~Browser~~ display instructions;
  - f) ~~Transmitting~~ transmitting said output data to said at least one Client.
2. (currently amended) The ~~computer network~~ method of Claim 1 wherein only steps c-f may be repeated for each new simulation of the same form and wherein only steps b-f may be repeated for each simulation of a new form.
3. (currently amended) The ~~computer network~~ method of Claim 2 wherein at least some of said output data is automatically rendered by Client ~~Browser~~ methods for graphical display.
4. (currently amended) The ~~computer network~~ method of Claim 1 wherein said Unique Identifier is used to keep the data of each user separate from all other users, with high probability (>99%).
5. (currently amended) The ~~computer network~~ method of Claim 4 wherein said user data is stored in temporary files with a limited lifetime.
6. (currently amended) The ~~computer network~~ method of Claim 1 wherein the Unique Identifier is made verifiable by means of an internal checksum.
7. (currently amended) The ~~computer network~~ method of Claim 6 1, ~~and a database of Unique IDs, simulation counts and timestamps, indexed by at least said Unique ID and stored in at least one Server and further~~ comprising the following additional steps before processing of said merged data:
- a) ~~Lookup the Unique Identifier in the database and retrieve the~~ retrieving a database record indexed by the Unique Identifier, said database record containing at least an associated simulation count usage and timestamp;

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- b) ~~If no record found, create~~ creating a new database record when no existing record is found, said new database record associated with indexed by the Unique Identifier ~~and having the~~ and containing at least a simulation count ~~usage~~ initialized to zero (0) and ~~the~~ a timestamp initialized to the current time;
  - c) ~~deleting said retrieved record and backing up at least one step, if said timestamp has become older than a certain threshold; delete said simulation record and return to step a)~~
  - d) ~~skipping at least the processing of said merged data, Using said Identifier, if said simulation count and timestamp, determine if the number of simulations~~ simulation usage per unit time has exceeded some threshold; ~~Simulate only if said threshold has not been exceeded.~~
  - e) ~~Increment~~ updating the number of simulations performed said simulation usage in said database record and ~~save~~ saving the updated record ~~of at least Unique Identifier, updated of simulation count usage and timestamp in said database.~~
8. (currently amended) The ~~computer network~~ method of Claim 7, wherein the simulation ~~count~~ usage is used to lower the process priority of the simulation.
9. (currently amended) The ~~computer network~~ method of Claim 1, wherein additional steps related to circuit synthesis are inserted just before step b), such steps comprising:
- aa) ~~Transmitting~~ transmitting Circuit Synthesis Form ~~Structure~~ Creation Data to said Client;
  - bb) ~~Accepting~~ accepting Circuit Synthesis Form Data from said Client;
  - cc) ~~Synthesizing~~ synthesizing a circuit according to said Circuit Synthesis Form Data, where said synthesized circuit and other temporary files are optionally kept on the Server and indexed by means of the Unique Identifier for eventual use in step 1e);

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dd) ~~Creating~~ creating Form Structure Data for use in step 1b), said Form Structure Data containing circuit topology data.

10. (currently amended) An interactive network simulation method, for use with at least one Client communicating with at least one Server over a Network by means of a Stateless Communications Protocol, said method comprising:

a) ~~Creating~~ creating and transmitting a Unique Identifier from a Server to a Client;

b) ~~Transmitting~~ transmitting Form ~~Structure~~ Creation Data from a Server to said Client;

~~(new)~~ Transmitting transmitting Schematic data from a Server to said Client;

~~(new)~~ displaying a Form as described by said Form Creation Data and rendering an associated Schematic as described by said Schematic Data by display methods of said Client.

e) ~~Accepting User Form Data into a Server from said Client;~~

d) Merging merging of User Form Data from said Client with other data, including simulation template data;

e) Processing processing by a Server of said merged data to produce at least graphical output data, wherein said graphical output data are functions of a simulation and in a format compatible with said ~~Client Browser~~ Client's display instructions;

f) ~~Transmitting~~ transmitting at least said graphical output data to said Client.

11. (currently amended) The ~~computer network~~ method of Claim 1, wherein said assigned Unique Identifier is associated with superior or inferior privileges, said privileges comprising at least one of: a) access to models and circuits, b) simulation priority and/or maximum simulation time, c) quality/accuracy of simulation methods employed, d) the maximum size and/or persistence of design and/or simulation data.

12. (currently amended) The ~~computer network~~ method of Claim 14, wherein said assigned Unique Identifier ~~may be~~ is saved ~~in the~~ on the Client ~~Client's browser~~ (e.g.,

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a "Cookie") to permit a simulation or synthesis session to be suspended and resumed at a later time without requiring the user to re-qualify for access.

13. (currently amended) The ~~computer network~~ method of Claim 1, wherein some portion of the said User Form Data is logged together with at least said Unique Identifier for marketing, sales or debugging purposes. Suitable storage mechanisms for said logged data include, but are not limited to: a) HTTP log file (if HTTP GET mechanism used to initiate simulation), b) file of a type and format determined by the simulation software or c) database record.

14. (currently amended) The ~~computer network~~ method of Claim 1, wherein said Unique Identifier is created and transmitted contingent upon the user qualifying for access by successfully conveying appropriate qualification data from the Client to the Server.

15. (currently amended) A server simulation method, for use with at least one Client communicating with at least one Server over a Network by means of a Stateless Communications Protocol, ~~network of computers comprising at least one Client, said at least one Client including memory means containing instructions for a Browser, and at least one Server communicatively coupleable to said at least one Client, said at least one Server including memory means containing instructions for implementing a simulation method,~~ said simulation method comprising the steps of:

- a) creating and transmitting a Unique Identifier to said at least one Client,
- b) transmitting Form Structure Data to said at least one Client,
- c) accepting User Form Data and said Unique Identifier from said at least one Client,
- d) merging said User Form Data from said at least one Client with other data, including template data,
- e) processing said merged data to produce output data, wherein said output data are functions of a simulation and in a format compatible with said at least one Client Browser instructions,

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- f) while processing said merged data to produce output data, simultaneously capable of accepting and processing new User Form Data from ~~the identical~~ said at least one Client, reception of said new User Form Data with identical Unique Identifier causing present execution of simulation method to be aborted and associated resources freed in favor of processing of said new User Form Data, ~~Where such replacement data is received, step g of the present first simulation method instance is not executed. If no such replacement data is received, processing completes and step g is executed.~~
- g) transmitting said output data to said at least one Client.

16. (currently amended) The ~~computer network~~ method of Claim 1 with the additional ability to execute a plurality of simulation method steps c-f from a single Client concurrently, said plurality being reduced to a single simulation method by aborting all but the method steps corresponding to the last submitted Client User Form Data.